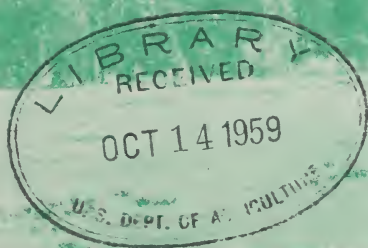


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GUIDE TO SUSANVILLE RESEARCH CENTER

**PACIFIC SOUTHWEST
FOREST AND RANGE
EXPERIMENT STATION**

**KEITH ARNOLD, DIRECTOR
BERKELEY - 1959**

**FOREST SERVICE
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THE SUSANVILLE RESEARCH CENTER

The Susanville Research Center is a unit of the Pacific Southwest Forest and Range Experiment Station. This Station is one of nine maintained by the Forest Service throughout the United States to carry out research on forest, range, watershed, wildlife and recreation problems. Each serves a different region; the Pacific Southwest Station, headquartered at Berkeley, serves the California region of the Forest Service, and is also responsible for a forest research project in Hawaii.

As a facilitating field unit of the Station, the Center serves a specific area. Its work, however, is not restricted to problems that lie entirely within the Center area, but is also carried out on broad problems, of state, regional, or national significance that fall within the Center area.

The Research Center is equipped and manned to cope primarily with field investigations. Problems requiring the use of extensive or special facilities or special skills are worked out with interested cooperators who have such resources. Experience has shown that many forest and range problems can be attacked effectively only through cooperative effort by two or more agencies or groups.

CENTER AREA

The Susanville Research Center was established in 1956 with headquarters in Susanville, California. The Center encompasses about 10 million acres in 10 counties in the northeast corner of the State (fig. 1).

About 47 percent of this area is in private ownership. One percent is owned by the State and 52 percent by the Federal government. About 33 percent, largely forested, is administered by the Forest Service; 18 percent, largely rangeland, by the Bureau of Land Management; and 1 percent by the National Park Service.

Wildlands of this area are used principally for timber, livestock, and wildlife production. Recreation and water values are growing in importance each day because of the rapidly rising population in the State. Northeastern California has a great potential for providing recreational opportunities to thousands of people each year.



RESEARCH FACILITIES IN CENTER

The administrative offices of the Center are in Susanville, closely associated with the Lassen National Forest. A tree and shrub nursery in Susanville, administered by the Lassen National Forest, is used by the Center.

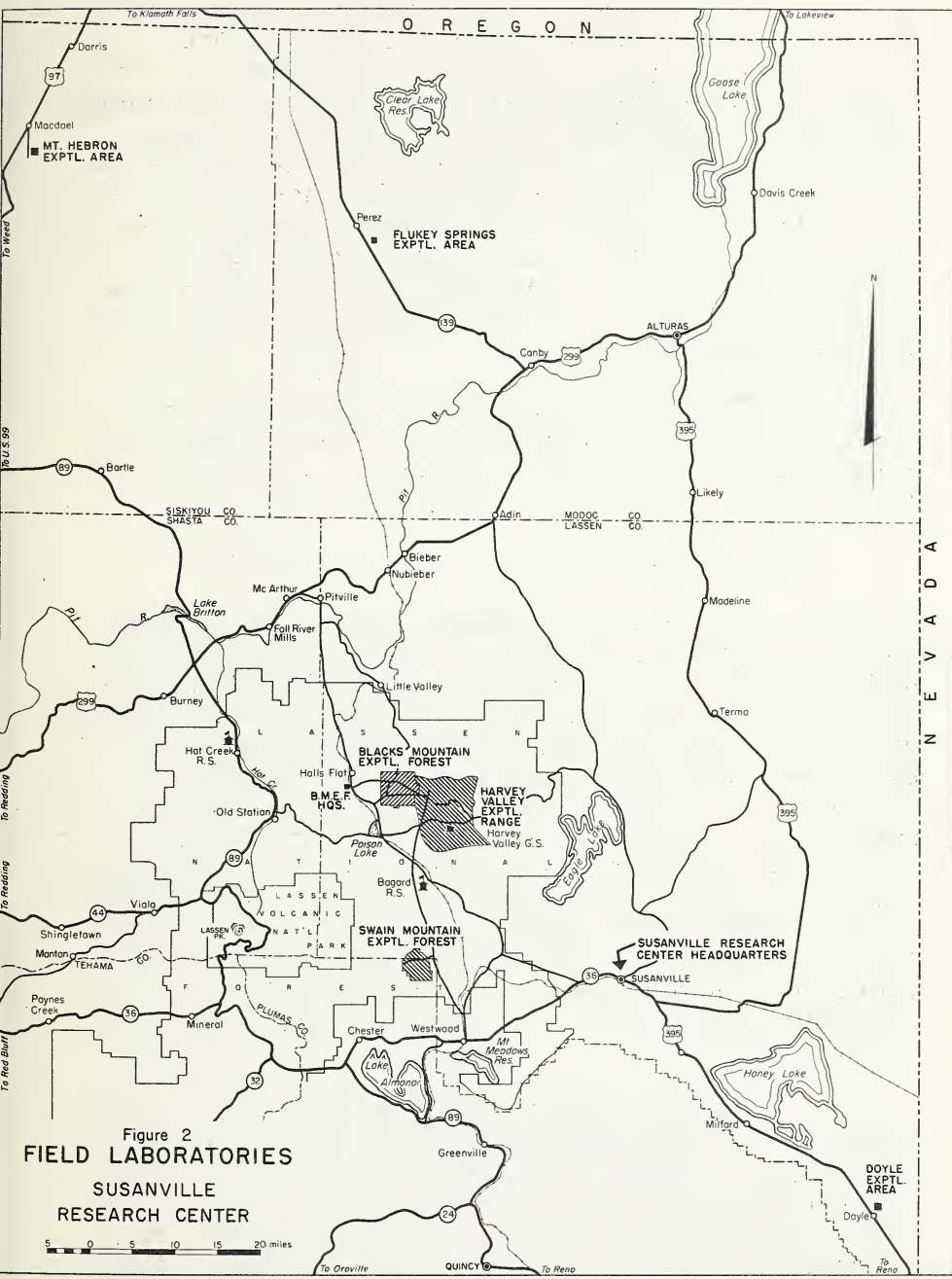


Figure 2
FIELD LABORATORIES
SUSANVILLE
RESEARCH CENTER

The main field headquarters of the Center is at Blacks Mountain, about 45 miles northwest of Susanville near Halls Flat (fig. 2). This headquarters serves three major experimental installations: the Blacks Mountain Experimental Forest, the Swain mountain Experimental Forest, and the Harvey Valley Experimental Range. Active field work at these locations is carried on mainly during the snow-free period, from May to November. The Blacks Mountain headquarters has facilities for housing and feeding 25 to 30 workers and servicing automotive and logging equipment. Office facilities and limited laboratory space are also available there.

Two other experimental installations have been set up to study game-browse regeneration problems. One is near Flukey Springs in Modoc County and the other near Doyle in Lassen County.

RESEARCH PROGRAM IN THE CENTER

The Pacific Southwest Forest and Range Experiment Station has had an active research program under way in the Center area since 1935. This program has dealt mainly with management problems of eastside pine forests and mountain livestock ranges. In 1956 research was started on management of white and red fir forests and on certain phases of game habitat improvement. For some time to come, the work of the Center will be concentrated on these problems, but it will also carry out research on broader problems that impinge on the Center area. One such project also started in 1956 deals with the influence of trees on the yield of water from snow-covered watersheds. Research on recreation problems is likely to be started in the near future.

Technical skills and information from nine research divisions of the Station can be brought to bear on problems of the Center as needed. The research fields covered by these divisions are forest management, forest economics, forest genetics, forest products utilization, forest fire, forest insects, forest diseases, range management (both livestock and game), and watershed management.

SPECIFIC PROJECTS AND COOPERATION

FOREST MANAGEMENT

Research on methods of cutting and managing pine forests on the eastern slopes of the Sierra-Cascade mountains to insure establishment of a new fully productive forest has been in progress at the Blacks Mountain Experimental Forest since 1937. A system of forest management called unit area control is being tested on the experimental forest. Experiments are also being conducted on forest thinning and pruning, tree planting, and natural forest regeneration. To insure cutting of the forest in the right way at the right time for experimental purposes, logging is carried out by Center personnel under cooperative agreement with the purchasers of the timber. Specialists in forest insect and disease problems, stationed at the Berkeley headquarters, and staff members of the Lassen National Forest help conduct these experiments.





Research on the management of red and white fir forests was started on the Swain Mountain Experimental Forest. Methods of cutting are being studied to insure proper development of a future stand, minimizing rot and windfall. The effect of cutting on snow melt and yield of water from the watershed on this area is being studied with Station watershed management specialists.

Cooperative studies are under way with the Department of Zoology of the University of California at Davis on the relationship of rodents and other animals to regeneration of pine and fir forests. Technical personnel of the University are headquartered in the Center.





LIVESTOCK RANGE MANAGEMENT

A grazing system designed to improve and maintain grazing capacity of mountain bunchgrass ranges and provide for high sustained livestock production has been developed from studies carried out by the Station in Lassen County from 1936 to 1951. This system, called rest-rotation grazing, is now being pilot tested on the Harvey Valley cattle allotment of the Lassen National Forest. This range is 32,000 acres in size and has grazing capacity for 500 animal units. The seventh year of a 20-year test was completed in 1958.

In this test, information is being obtained on stocking rate, season of grazing, livestock distribution, cattle weight gains, methods of measuring range condition and production, methods of establishing and maintaining reseeded stands of introduced species, and methods of controlling weed species and soil erosion.

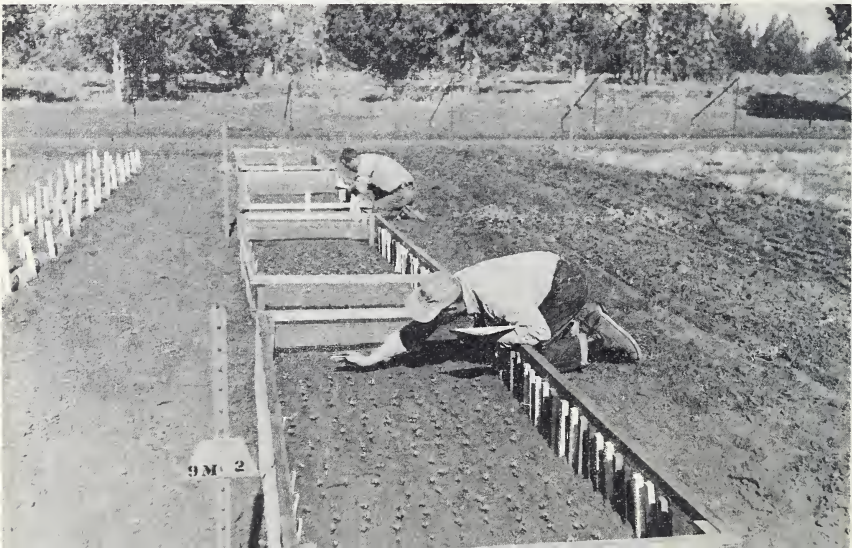
Cooperators in this program include the Extension Service, Agricultural Research Service, and Lassen National Forest grazing permittees.





GAME HABITAT IMPROVEMENT

Cooperative work is being carried out with the California Department of Fish and Game to develop methods of re-establishing browse plants on game ranges. This project is financed by Pittman-Robertson (Federal Aid) and State funds. In addition, Forest Service funds were set aside in 1957 to start broader studies on game range management. As the first step in this broader program, an analysis of the important game range problems in northeastern California is being made.





ADVISORY COMMITTEE

Progress in developing sound workable forest and range management practices depends on recognition of management problems and rating them in order of relative importance. The Center is depending on the counsel and guidance of an advisory committee to line up forest and range problems needing attention. A great variety of interests concerned with the management of forest and range resources will serve on the committee over the course of time: timber land owners, lumber manufacturers, stockmen, farmers, hunters, fishermen and other recreationists, water and power interests, business and banking interests, and State and Federal agencies, educational institutions, and legislators, State Division of Forestry, University of California, State Department of Water Resources, Bureau of Land Management, Soil Conservation Service, U. S. Forest Service, Extension Service. Eight to ten interests will be represented on the committee at any one time.

